



July 9, 2009

ERRATUM

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TWA325
Washington, DC 20554

Re: *ERRATUM: In the Matter of National Broadband Plan for Our Future GN Docket No. 09-51*

Dear Ms. Dortch:

On June 8, 2009, USTelecom filed comments in the above-captioned proceeding. This Erratum amends the comments as indicated below:

Figure 1 and Figure 2 is corrected to read as follows:

Figure 1: Growth in Broadband Subscribership

US Residential Broadband Subscribers

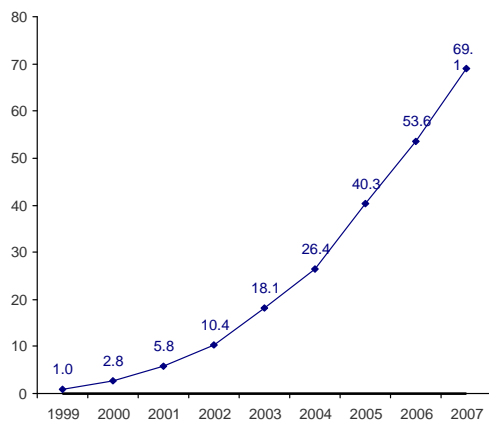
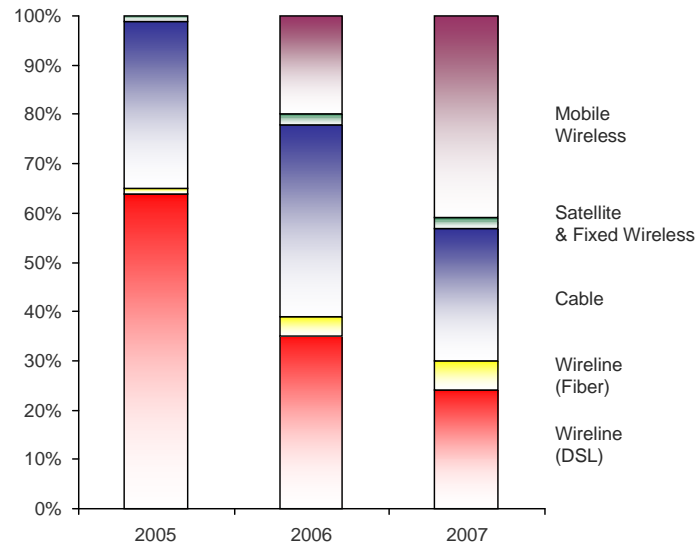


Figure 2: The Changing Mix of Broadband Technology

% of Residential Subscribers Added Per Period



Attached is the corrected Comment filed by USTelecom.

Sincerely,

Glenn Reynolds
Vice President, Policy

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	

**COMMENTS OF
THE UNITED STATES TELECOM ASSOCIATION**

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EXECUTIVE SUMMARY

With this Notice of Inquiry, the Commission takes a timely pause for reflection from what has been an extraordinary decade of growth of both broadband technology and access in order to set a course for what remains to be done. The resulting report to Congress will be a blueprint for setting this country's broadband policy and, as such, should reflect ambitious goals. USTelecom urges the Commission to set a goal of 100% broadband access *and* 100% broadband adoption by 2014. Although the actual decision to adopt broadband is ultimately for each consumer and business to make, we should strive to eliminate every barrier to adoption that prevents end users from becoming connected. While these are certainly "stretch" goals, setting a lesser bar for this important effort would simply be aiming too low. Still, approaching this goal will require the combined efforts of network providers, applications providers, and community organizations, along with federal, state and local governments.

Broadband in the United States has developed with speed and scope unparalleled by any prior technology. Moreover, unlike any other infrastructure effort of its scope, it has done so largely with private sector investment. By some estimates, cumulative capital expenditures by broadband providers from 2000-2008 were over half a trillion dollars, and private investment in broadband infrastructure has grown consistently since 2003. As a result of this massive private investment in infrastructure, an overwhelming majority of Americans today can choose among *multiple* broadband platform providers. Over 90% of U.S. households can choose from either a wireline or a cable broadband service and approximately four-fifths of U.S. households have access to both. In addition, mobile wireless broadband, from at least one of several providers, is available to more than 95% of U.S. households. As Congress and the Commission develop a strategy that envisions faster, smarter and more ubiquitous broadband networks, one of the

greatest risks to achieving that future is undermining the environment that encouraged that investment.

There are undoubtedly limited areas of the country that are unlikely to see robust broadband without government support, and USTelecom urges Congress and the Commission to consider innovative ways of creating the right incentives to invest in extending broadband into these areas. However, even with an optimal regulatory environment, there are some areas of the nation, particularly high-cost rural areas, that do not present a viable business case for private investment in high speed broadband facilities. Such areas require additional financial incentives for investment. There are several avenues for such incentives to be provided, including low cost loans, grants, tax incentives and universal service type mechanisms. Providing service to uneconomic to serve areas by leveraging the initiative and expertise of established private broadband providers is clearly preferable to direct investment by the government in constructing and operating broadband facilities.

Finally, it is essential to keep in mind that deployment of broadband infrastructure is not the ultimate goal, but rather a means to the end of bringing to all Americans *the benefits that can be derived from broadband access*. In order to achieve this true end-game, America's broadband strategy will need to address both access and adoption issues. Indeed, some of the government's greatest opportunity for improving lives through broadband access lies in eliminating barriers to adoption in areas where broadband is already available. While Americans have embraced broadband more quickly than any prior network technology, low income groups, the elderly and other disadvantaged communities that could most benefit from the benefits broadband has to offer are also the most undersubscribed. Rather than realizing the opportunities of broadband, these groups risk falling further behind. There is much that should and can be done to eliminate

broadband adoption barriers facing these groups and to make broadband access more relevant to people's lives. Accomplishing this, however, will require the mutual effort and innovation of all parts of the broadband community—including creating the right incentives for network providers to invest in bringing newer, more robust and smarter networks to all consumers.

USTelecom's member companies are investing billions of dollars every year to ensure that all Americans have the opportunities afforded by broadband access to the Internet. We look forward to working closely with Congress and the Commission as they map a strategy towards this common goal.

**Before the
Federal Communications Commission
Washington, D.C. 20554**

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**COMMENTS OF
THE UNITED STATES TELECOM ASSOCIATION**

Introduction and Summary

With this Notice of Inquiry, the Commission takes a timely pause for reflection from what has been an extraordinary decade of growth of both broadband technology and access in order to set a course for what remains to be done. The resulting report to Congress will be a blueprint for setting this country’s broadband policy and, as such, should reflect ambitious goals. USTelecom urges the Commission to set a goal of 100% broadband access *and* 100% broadband adoption by 2014. Although the actual decision to adopt broadband is ultimately for each consumer and business to make, we should strive to eliminate every barrier to adoption that prevents end users from becoming connected. While these are certainly “stretch” goals, setting a lesser bar for this important effort would simply be aiming too low. Still, approaching this goal will require the combined efforts of network providers, applications providers, and community organizations, along with federal, state and local governments.

As the Commission and Congress chart this course forward, it is imperative to be mindful that deployment of broadband infrastructure is not the ultimate goal, but rather a means to the end of bringing to all Americans *the benefits that can be derived from broadband access*. Towards the close of the *NOI*, the Commission notes that its report is to include a plan for the use of broadband infrastructure and service in advancing a series of public policy goals including civic participation, health care delivery, energy independence, education and job creation. In

reality, these policy goals are the true “end-game” of this effort and broadband should be viewed as a critical vehicle for achieving these goals.

But in order to achieve this true end-game, America’s broadband strategy will need to address both access and adoption issues. Indeed, while there are undoubtedly limited areas of the country that are unlikely to see robust broadband without government support, some of the government’s greatest opportunity for improving lives through broadband access lies in eliminating barriers to adoption in areas where broadband is already available. As the Pew Internet & American Life Project has demonstrated, twice as many consumers cite relevance and usability as a reason for not being connected than those that point to price or availability. Moreover, low income groups, the elderly and other disadvantaged communities that could most benefit from the benefits broadband has to offer are also the most undersubscribed. Rather than realizing the opportunities of broadband, these groups risk falling further behind. And while there is an inclination by some to simply say that such consumers simply do not understand the benefits of the Internet, there is much that can be done to make broadband access more “relevant” to people’s lives. But doing this will require effort and innovation by all parts of the broadband community—including creating the right incentives for network providers to invest in bringing newer, more robust and smarter networks to all consumers.

Discussion

I. Assessing Where We Are Before Setting a Course Forward

The first step in discerning what steps are needed to move forward necessarily is to have a proper understanding of where we are and how we arrived here. And putting aside the rhetoric about national rankings and the like, the fact is that broadband in the United States has developed with speed and scope unparalleled by any prior technology. Moreover, unlike any other

infrastructure effort of its scope, it has done so largely with private sector investment. As Congress and the Commission develop a strategy that envisions faster, smarter and more ubiquitous broadband networks, one of the greatest risks to achieving that future is undermining the environment that encouraged that investment.

A little more than a decade ago, the Commission was engaged in the extremely resource-intensive process of implementing the Telecommunications Act of 1996—a statute that barely acknowledges the Internet and reflects the fact that few at the time envisioned Internet access to becoming a part of everyday life for a majority of Americans.

In the relatively short span since that time, wireline, wireless, satellite and cable providers have invested hundreds of billions of dollars to deploy broadband networks. By some estimates, cumulative capital expenditures by broadband providers from 2000-2008 were over half a trillion dollars.¹ In 2008 alone, broadband providers invested at least \$64 billion to deploy and upgrade their networks.² The pro-competition and pro-investment environment of recent years has encouraged significant growth in broadband network investment. Private capital investment has grown consistently since 2003.³

As a result of this massive private investment in infrastructure, an overwhelming majority of Americans today can choose among *multiple* broadband platform providers. Over 90% of U.S. households can choose from either a wireline or a cable broadband service and

¹See United States Department of Commerce, National Telecommunications and Information Administration (NTIA), *Networked Nation: Broadband in America 2007* (January 2008), pp. 32-34. The NTIA data include payments for wireless spectrum licenses. Wireless, capital expenditures for 2000-2002 were derived by taking the difference of cumulative capital expenditures published by the Federal Communications Commission in its Tenth Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services (FCC-05-173) (Released September 30, 2005), Table 1 at p. 80.

²Yankee Group. © Copyright 1997-2009. Yankee Group Research, Inc. All rights reserved. Yankee Group estimates that broadband providers invested \$64.2 billion in 2008, up from \$62.5 billion in 2007. Data are in nominal dollars and include wired and wireless telecommunications carriers and cable providers. Wireless spectrum license payments are not included.

³See, NTIA, *Id.*

approximately four-fifths of U.S. households have access to both.⁴ In addition, mobile wireless broadband, from at least one of several providers, is available to more than 95% of U.S. households.⁵ Satellite broadband is available to any household in the country within view to the satellite, *i.e.*, nearly all of the country.⁶

U.S. consumers have embraced broadband technology. Residential subscribership has grown from 1 million in 1999 to at least 69 million in 2007.⁷ See Figure 1. The U.S. achieved 50% broadband household penetration in less than nine years, more rapidly than any other network technology and many critical information technologies.⁸ Household adoption is now approaching 60%.⁹ For broadband to exceed 50% penetration in less than nine years is

⁴The National Cable and Telecommunications Association states that cable modem service was available to 92% of U.S. households as of year end 2008. See <http://www.ncta.com/Statistics.aspx> (visited June 1, 2009). The Commission estimates that, as of December 2007, ADSL was available to 82% of U.S. households. See Federal Communications Commission, High Speed Services for Internet Access: Status as of December 31, 2007 (January 2009), at p. 3. Today, ADSL or fiber is likely available to more than 82% of households.

⁵See Michael J. Copps, Acting Chairman, Federal Communications Commission, Bridging Broadband to Rural America (May 22, 2009) at p. 12.

⁶Wireless broadband providers are planning to upgrade existing third generation mobile broadband networks to higher-speed fourth generation technologies. Verizon and AT&T plan to deploy Long Term Evolution (LTE) technology over the next several years. See <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26819> (visited June 1, 2009) and <http://investor.verizon.com/news/view.aspx?NewsID=983> (visited June 1, 2009). Clearwire, which was recently spun off from Sprint, projects that its fourth generation wireless broadband services using new mobile WiMAX technology will be available to 120 million people by 2010.⁶ See Clearwire Corporation, United States Securities and Exchange Commission Form 10-K (filed March 26, 2009), at pp. 2-3.

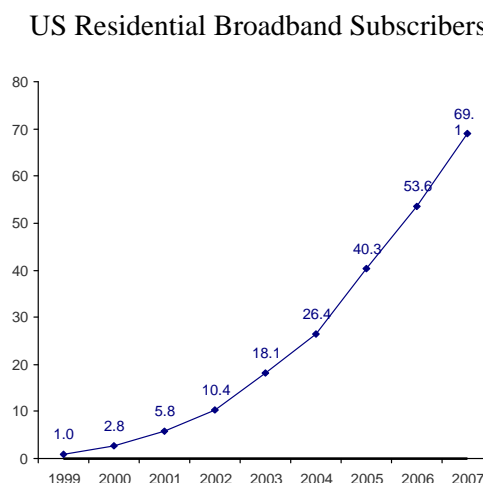
⁷Federal Communications Commission, High Speed Services for Internet Access: Status as of December 31, 2007 (January 2008), at Table 4.

⁸See John Horrigan, Home Broadband Adoption 2008, PEW Internet & American Life Project, Home Broadband Adoption 2008 (July 2008) at p. 3. According to PEW, broadband achieved 50% penetration sometime between March of 2007 and May of 2008.

⁹PEW Internet & American Life, *Id.* It is more precise to evaluate the number of households subscribing to broadband than connections as a percentage of population because the latter fails to account for household sizes. This is one of several methodological flaws in the approach used by OECD to “rank” relative broadband usage across nations. See, Phoenix Center Policy Paper No. 29, *The Broadband Performance Index: A Policy-Relevant Method of Comparing Broadband Adoption Among Countries* (July 2007) (demonstrating that if every home and business in every OECD country were subscribed to broadband, the United States would still rank 20th under its methodology because households in the U.S. are larger than in most OECD countries).

remarkable, especially when compared to other communications and information technologies. After its invention by Alexander Graham Bell in 1876, the first telephone exchange appeared in 1878 and the first automatic switch went into commercial use in 1892.¹⁰ After the Bell patents expired in 1894, thousands of companies entered the market to provide local exchanges. Yet the telephone did not achieve 50% household penetration until sometime between 1940 and 1950—about a half a century after the patent expiration. Cable television service took over thirty-five years to achieve 50% household penetration in the U.S.¹¹; personal computers took 20 years; color televisions took 20 years; and wireless telephones took 16 years.¹²

Figure 1: Growth in Broadband Subscribers



Furthermore, consumers are benefiting from policies that have encouraged facilities-based broadband competition, with more broadband options, lower prices, and faster throughput. As a result of the parallel development of wireline and cable broadband platforms, the United States has the most competitive broadband market in the world. New technologies such as fiber

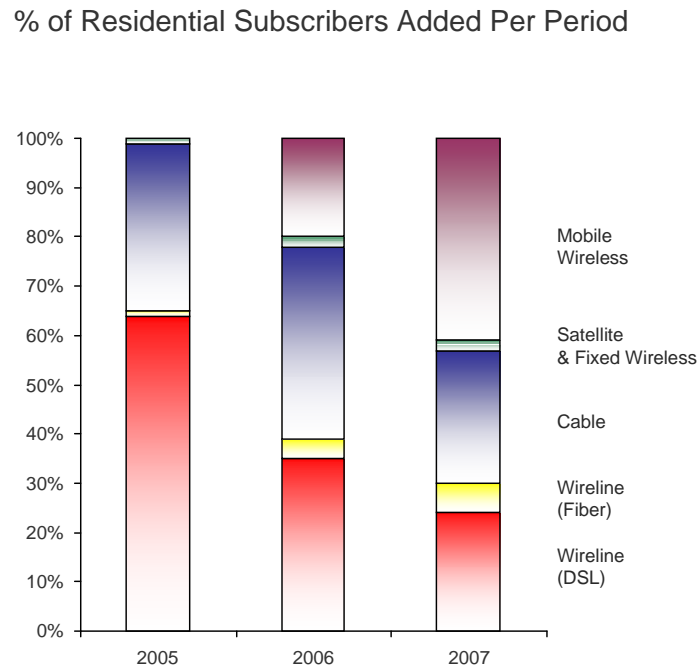
¹⁰Federal Communications Commission, Statistical Trends in Telephony July 1998, Table 16.3, page 87 at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend298.pdf (visited June 2, 2009).

¹¹U.S. Department of Commerce, Census Bureau, Statistical Abstracts of the United States (2008, 2000, 1994, 1985, 1980, 1976) available at http://www.census.gov/compendia/statab/past_years.html (last visited June 2, 2009)

¹²Consumer Electronics Association, Household Product Penetration, 2008-9.

and mobile broadband have taken a growing share of new broadband subscriptions. *See* Figure 2.¹³

Figure 2: The Changing Mix of Broadband Technology



Prices for basic wireline broadband services have dropped by half since the beginning of the decade. By 2007, consumers could get 10-20 times the speed they could get for the same price as they paid at the start of the decade. *See* Figure 3. Moreover, competition between cable, wireline and wireless companies are continuing to force investment in faster and faster networks. Today, broadband providers are in the initial stages of deploying technologies that will be capable of providing speeds of 50 to 100 megabits per second to the home.

¹³*See* Press Release, FCC, High-Speed Services for Internet Access: Status as of Dec. 31, 2007, (Jan. 16 2009) available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-287961A1.pdf (Data is based on FCC's most restrictive definition of broadband, i.e., residential "advanced services" that are greater than 200 kbps upstream and downstream.)

Figure 3: Weighted Average Monthly Price for Top 5 ILEC Wireline Broadband¹⁴

Weighted Average Monthly Prices for Top 5 ILEC Wireline Broadband Services

Year	Maximum Advertised Price by Downstream Speed Tier					
	Up to 768 kbps	768 kbps -1.5 mbps	Up to 3.0 mbps	Up to 7.0 mbps	Up to 15 mbps	Up to 30 mbps
2001	*	\$50	n/a	n/a	n/a	n/a
2002	\$28	\$32	*	n/a	n/a	n/a
2003	\$28	\$30	*	n/a	n/a	n/a
2004	\$30	\$33	\$46	*	*	n/a
2005	\$20	\$27	\$33	\$39	*	*
2006	\$20	\$23	\$28	\$36	*	*
2007	\$18	\$25	\$28	\$39	\$51	*

The U.S. economy increasingly depends on a healthy broadband and information and communications technology (ICT) ecosystem. Continued investment in more and more powerful broadband networks is critical to stimulating technological innovation. Broadband and ICT investment is a key driver of economic growth, productivity, consumer value, and millions of high-paying jobs. It is also integral to achieving policy goals, such as enhanced civic participation, health care delivery, energy independence, and education.

All of this growth and innovation has flourished under a light-touch regulatory regime. As has been demonstrated time and time again, heavy or imbalanced regulatory schemes impose costs that significantly impair the investment needed to meet the demand for faster and smarter broadband networks.

II. Establishing Goals and Benchmarks

Private investment continues to push broadband to the vast majority of geographic and demographic populations, driven by competition and new technologies. Fiber-to-the-Home,

¹⁴Wireline Broadband Pricing 2001-2007, USTELECOM: THE BROADBAND ASSOCIATION (June 2008), *available at* <http://www.ustelecom.org/uploadedFiles/Learn/Broadband.Pricing.Document.pdf> (last visited June 1, 2009). Copyright USTelecom 2008.

Advanced DSL, Cable DOCSIS 3.0 and next generation wireless technologies such as LTE and WiMax are just hitting their deployment stride as companies continue to increase broadband speeds in order to win broadband customers from competitors and keep their own customers from leaving for competitive offerings. At the same time, wireline and wireless broadband providers are working to extend the reach of their broadband networks to more and more rural and other difficult to serve customers. All while the price per megabit of speed has continually declined. And on the demand side, because of changes in technology and the rapid development of new and creative applications, the bandwidth necessary to deliver that next “killer app” that will entice more consumers to broadband is a constantly moving target.

In this extremely fluid environment, trying to set goals and benchmarks is difficult to say the least. Indeed, trying to regulate the development of broadband runs the real risk of discouraging the very innovation that has brought us to this point. Accordingly, it is important that as the Commission and Congress consider a strategic plan, that they remain mindful of the fact that none of us is capable of looking very far out to know the ingenious and innovative turns that this technology and associated applications will take if given the regulatory freedom to develop in the most efficient ways. Subject to that caveat, however, there can be little debate that the country must set an ambitious goal of providing *all Americans with meaningful broadband access—and USTelecom believes we should aim to get to that goal within five years.*

A. Defining Broadband Capability

In the *NOI*, the Commission asks for comment on how it should define “broadband capability,” including how to take into account the various existing and emerging technologies. In particular, the *NOI* notes that the Commission’s current broadband data collection efforts are, as the *NOI* terms it, tethered to various numerical definitions. The *NOI* asks whether this is an

appropriate way to look at broadband or whether a more “experiential” approach would be preferable.

As emphasized above, what Congress and the Commission ultimately must be concerned about is whether end-users in all areas of the Nation are able to avail themselves of the tremendous benefits that can be derived from broadband access. That is, because it is these benefits rather than simply having access to big dumb pipes that is of importance to the public, the “experiential” approach is certainly the correct one in the long-term. Given the constantly changing technology and development of new applications, however, such an assessment will require on-going efforts to obtain information from software and applications developers about the bandwidth needed to satisfy end-user demand. The answer to this question is neither stagnant nor is it uniform—there will be a broad spectrum of demand among end-users for bandwidth and any effort to set a single standard for all end-users will ultimately create incentives for inefficient deployment.

As for speed data, the tiered levels recently adopted by the Commission for use in the Form 477 Reports are appropriate. The most important immediate goal in this regard is to identify geographic areas where meaningful broadband access is severely lacking. As discussed below, these are likely to be areas that are most in need of government action to ensure access and identifying these unserved and underserved groups is the first step in developing access strategies.

It is also important to understand where various populations are in the transition from first-generation broadband to very robust broadband capabilities. Simply ignoring lower speed broadband capabilities in the Commission’s data gathering would make this analysis impossible and likely serve to deter broadband adoption in areas that are currently only served by such lower

speed technologies. Therefore, for the time being the Commission should continue collecting broadband speed data using the existing tiers.

B. Defining Access to Broadband

As with the definition of broadband capability, the Commission should not view the definition of broadband access as a static concept given the current fluid nature of broadband deployment. The goal is not to build pipes for the sake of having them, but rather to deliver the benefits of broadband to all Americans.

Accordingly, it would be counterproductive for Congress and the Commission to ignore the importance of access through schools and libraries, at work and through public and private hot spots. Indeed, the Commission's efforts to ensure broadband access through its schools and libraries universal service program has certainly been one of the great successes by providing access to populations that might not otherwise have it. At the same time, this has certainly driven up at-home adoption rates by creating awareness and familiarity with the benefits of broadband access.

Congress and the Commission should consider how other programs could similarly lower barriers to broadband adoption, particularly among low income and other under-represented demographic groups. For example, creating incentives for deployment to other key institutions and "anchor tenants" in underserved areas could create on-line access opportunities for those without broadband at home, while simultaneously establishing the beginnings of broadband deployment to communities that can act as the basis for more wide-spread deployment. Such programs are particularly essential to bringing the benefits of broadband to low income and other under-represented demographic populations and should be considered a key interim step to reaching both 100% access and 100% adoption of broadband. The Pew studies have

demonstrated that income levels is one of the most important factors relating to adoption, so it would be a mistake to ignore policies that make broadband available to the public other than through at-home adoption.

III. Supply Side: Mechanisms for Ensuring 100% Access

The pro-competition and pro-investment environment of recent years has, bolstered the U.S. economy and generated hundreds of billions in investment, innovation and consumer benefits. Any change to current policies bears a heavy burden to demonstrate how that change could improve sector performance and to carefully account for the affects on jobs, growth and innovation as that change ripples through the ICT ecosystem. Policy should maintain a positive climate of broadband networks and consumer-driven investment, innovation and growth.

A. Incenting Private Investment

As noted above, the existing light-touch regulatory approach to broadband networks and services has resulted in the deployment of multiple networks to the vast majority of the American population. And as we speak, wireline, cable, satellite and wireless providers are continuing to invest billions of dollars every year to expand those networks, while making them faster and smarter. Regulatory policies that impose costs on network providers run the very real risk of slowing not only this infrastructure deployment, but also having significant negative effects on the broader U.S. economy.

Unlike roads and bridges, over 90% of U.S. communications infrastructure is maintained through private investment. In each of the past two years alone, the nation's nearly 1,400 facilities-based broadband service providers have invested more than \$60 billion in modern communications networks. This investment actually exceeds all federal investment in U.S. transportation infrastructure last year. In fact, adjusted for inflation, current annual private sector

broadband investment is more than twice the U.S. government's prior average annual investment in building the interstate highway system and putting a man on the moon – combined.

This is not investment that the government should seek to replace or replicate. The incentive for continued private sector investment will certainly be discouraged by government policies that impose regulatory costs or that create government subsidized competition to these private networks. Both the deployment and operation of broadband networks involve expenditures of tremendous fixed costs, much of which are sunk, so any additional risk or costs can significantly deter investment. This is particularly true in high-cost rural areas where the economics of broadband deployment are particularly tenuous.¹⁵ Regulations that impose costs or prevent broadband providers from offering consumers innovative services will directly affect the number of broadband providers that can economically deploy networks in these areas.

The private investment that would be lost from such regulatory policies could not be made up through increases in government spending. Indeed, the extraordinary one-time stimulus money in the ARRA dedicated to broadband development was not only just a fraction of overall *annual* private investment—it was less than the *annual* investment in broadband of USTelecom members AT&T and Verizon individually.

Furthermore, private investment in broadband infrastructure supports the entire information and communications technology (ICT) sector, and all sectors of the U.S. economy increasingly depend on broadband and ICT to facilitate their participation in the global information economy. The national broadband strategy, therefore, must be formulated in the context of the broader goals of economic growth, consumer quality of life, and the Commissions public policy objectives.

¹⁵Phoenix Center Policy Paper No. 25, *The Burden of Network Neutrality Mandates on Rural Broadband Deployment* (2006) (concluding that the increased costs of complying with network neutrality mandates would affect incentive to deploy broadband in rural areas six times more than in urban areas).

Developments over the last half-decade have provided critical mass for the phenomenon of “convergence” – the coming together of the information, communications, and technology industries technologically, economically, and competitively. In this dynamic and growing ecosystem, providers of broadband communications networks, digital devices, and a limitless array of content and applications all rely on each other to generate new value for consumers and multiple benefits for the U.S. economy. At the same time, ICT industries are competing across traditional industry boundaries, bringing competitive discipline to the innovative process.

The broadband-fueled ICT sector has become a major engine of economic output and growth. ICT contributed \$902 billion in GDP in 2007 – among the top contributing sectors in the U.S. economy and the primary driver of real, inflation-adjusted growth.¹⁶ U.S. firms invested \$455 billion in ICT in 2008, representing 22% of total investment. Broadband providers alone invested over \$64 billion in 2008. Annual network infrastructure investment is up over 30% since 2003.¹⁷

ICT investment and usage have yielded substantial economic benefits. ICT provides at least ten million jobs in ICT industries and across the economy.¹⁸ Economists have estimated that at least one-third, and likely more of ongoing productivity growth is attributable to ICT.¹⁹ The impact of productivity is to raise incomes, generate economic growth, and enhance U.S. global competitiveness. Broadband and ICT also have provided consumers exponentially better value for a stable share of national income. For example, in communications, the mix of

¹⁶See, Patrick S. Brogan (USTelecom), New York Law School Media Law & Policy, Volume 18, Number II (Spring 2009) at pp. 69-71.

¹⁷See, Brogan, *Id.* at pp. 71-75.

¹⁸*Id.* at pp. 81-82.

¹⁹*Id.* at pp. 82-85.

spending has shifted over time from traditional voice services to broadband, entertainment, and mobile services. Yet, while U.S. communications expenditures as a share of national disposable income have been flat since 1997, we have added over 100 million broadband and video connections, hundreds of new video programming choices, and over 100 million additional wireless connections.²⁰

B. Deployment to Rural and Other Uneconomic Areas

As noted above, markets and private industry investment are providing competitive broadband to most of the nation. While there are areas that are too challenging to serve solely through private investment even with an optimal regulatory environment, such areas can be minimized and the need for government support can be most efficiently directed by regulatory policies that provide certainty and do not discourage such investment.

Removal of disincentives for investment have spurred construction of broadband facilities in most areas of the nation, and additional Commission actions providing regulatory certainty will further encourage providers to use private capital to enhance and extend broadband facilities. As noted in the Acting Chairman's Report to Congress 'Bringing Broadband to Rural America,'²¹ resolution of several Commission proceedings will be helpful in encouraging private capital to invest in broadband facilities in markets today viewed as marginal. These pending proceedings identified by the Acting Chairman include universal service reform, network openness, spectrum access, middle mile/special access reform, inter-carrier compensation, access to poles and rights of way, tower siting, and video programming proceedings.

However, even with an optimal regulatory environment, there are some areas of the nation, particularly high cost rural areas, that do not present a viable business case for private

²⁰*Id.*

²¹*See*, Acting-Chairman Copps Rural Report to Congress at pp. 54-71.

investment in high speed broadband facilities. Such areas require additional financial incentives for investment. There are several avenues for such incentives to be provided, including low cost loans, grants, tax incentives and universal service type mechanisms.

Providing service to uneconomic to serve areas by leveraging the initiative and expertise of established private broadband providers is clearly preferable to direct investment by the government in constructing and operating broadband facilities. Government should not and need not be in the business of operating businesses providing broadband service. The successful experience of over half a century of the Rural Utilities Service (RUS) telecom infrastructure loan program demonstrates the viability of the private enterprise model. RUS borrowers have been able to use low cost funding to move from step to digital to packet switching, from party-line telephone service to VoIP and other sophisticated broadband offerings, all with a spotless repayment record and with universal availability of the funded service. Government financing of private deployment of telecom facilities not only creates jobs and economic development, it strengthens telecom entities that can provide government with an additional return on its investment through payment of taxes. Moreover, as technology and other conditions governing the feasibility of providing broadband improve, providing incentives for private companies to build out these networks (as opposed to government entities) does not risk crowding out potential private investment. Such risk was recognized in a recent report of the European Commission counseling caution in providing state subsidies for constructing additional broadband networks where services are already being provided. As this report concludes, “it must be ensured that State aid does not crowd out market initiative.”²²

²²European Commission Report, “Community Guidelines for the application of State aid rules in relation to rapid deployment of broadband networks,” at para. 5, available at http://ec.europa.eu/competition/consultations/2009_broadband_guidelines/guidelines_en.pdf

There is a continuum of need for support to bring high speed broadband service to high cost areas that could potentially match the various options available for government assistance. Construction of facilities in some areas could be incented by more favorable tax treatment of broadband investment, other areas may need low cost government loans, and the most challenging areas to serve may require direct grants, whether through a project-oriented universal service mechanism or through programs akin to those created in the recently enacted broadband stimulus legislation.

Government should strive to integrate its programs that support broadband deployment. Some areas may require a combination of solutions to allow feasible deployment of high speed broadband facilities. In this regard, the Chairman's report on rural broadband addresses improving federal agency coordination and other coordination efforts.

1. Universal Service Programs

The high cost universal service fund, currently administered by the Federal Communications Commission, should evolve to include support for broadband as networks are evolving towards broadband services.²³ Such support should mimic the approach taken by Congress in ARRA – distribution of funding should be on a primarily project-oriented basis. This approach will permit the Commission to best prioritize the uses of scarce funding and will permit the Commission to recognize the corresponding burden on contributors of universal service funding. Exclusive of any fund size increase due to inter-carrier compensation reform, it must be recognized that reform to the fund can and should be accomplished within predetermined budget constraints. Necessary changes to the fund can and should be

²³This broadband funding may be supplemented with stimulus funds and support from broadband programs administered by other agencies.

accomplished within a fund size no greater than a modest increase over the current size. Better targeting and elimination of duplicative support can help accomplish this goal.

Universal service funding for broadband facilities does not require broadband to be a supported service under Section 254 of the Act.²⁴ Categorizing broadband as a supported service would be counterproductive. Various requirements that could accompany such a designation may make it less viable for a potential provider to build out or upgrade broadband facilities in a particular area. There is ample precedent for supporting services other than those listed as a supported service. For example, the Commission acknowledges that universal service funding for joint use facilities supports broadband services as well as the voice services listed as supported services. And mobility appears nowhere in the list of supported services, yet support for wireless CETCs has been available for years and now accounts for a billion dollars in high cost support.

As the Commission examines the proper pace and structure for the evolution of universal service to support broadband facilities it should not ignore the need for continued support for narrowband services necessitated by the Carrier of Last Resort (COLR) responsibilities still placed upon incumbent local exchange carriers. As long as carriers are mandated to serve all subscribers within a particular area, no matter how uneconomic to do so, universal service support will be required in some areas to fulfill that obligation. It would be unfair to saddle carriers with this responsibility and then force them to internally subsidize uneconomic areas while not placing similar obligations on competitors. The Commission should also carefully how to reform COLR obligations to better reflect current industry realities.

²⁴See, Telecommunications Act of 1996, 47 U.S.C. Sec. 254.

2. “Middle Mile” Facilities

While there has been a great deal of attention appropriately focused on providing the “last mile” broadband connection to the subscriber, the cost of establishing and maintaining very long middle mile connections can also be an obstacle to provision of high speed broadband service to high cost areas. Such facilities can be extremely costly to build and maintain in more rural areas because of their length and the relatively small number of end users over which to spread the cost. This issue was documented by NECA in its “Middle Mile Study,” its study “The Packet Train Doesn’t Stop at Every Door” and by the Statement of Managers accompanying ARRA that specifically mentioned the availability of funding for middle mile facilities.²⁵ Some areas may have loop lengths amenable to last mile solutions with a reasonable cost but the expense of broadband transport between such areas and the Internet backbone may be prohibitive. Furthermore, as end user applications such as video streaming and others become more bandwidth intensive, high capacity last mile solutions may still encounter a bottleneck at the middle mile facility. Some areas have employed creative solutions to address this issue, but these are far from ubiquitous and may have been feasible due to unique circumstances not able to be duplicated elsewhere.²⁶ The Commission should consider evaluating the extent to which this issue poses a barrier to broadband access.

3. RUS and NTIA Grant Programs

USTelecom continues to support the RUS telecom loan programs as an important vehicle to bring broadband facilities to challenging areas. Both the Title II infrastructure loan program

²⁵See NECA’s “Middle Mile Cost Study,” Nov. 2001), and NECA’s “The Packet Trains Needs to Stop Every Door” (June 2006), and Statement of Managers, *American Recovery and Reinvestment Act of 2009*, Pub. L. No 111-5 (February 17, 2009).

²⁶For example, Virginia’s successful Mid-Atlantic Broadband Cooperative (<http://mbc-va.com>) received funding from the tobacco litigation settlement received by the state of Virginia.

(which initially funded plant used for voice service but now is utilized by borrowers to primarily build and upgrade broadband facilities) as well as the Title VI broadband loan program are helpful in providing debt capital to upgrade broadband facilities.²⁷ However, in recent years, it has been demonstrated that it is very difficult to prove financial feasibility sufficient for the government to risk extending debt capital to many, if not most, unserved areas. While the changes included in last year's Farm Bill related to the eligibility of certain projects for RUS broadband program funds aspire to target loans to unserved areas, it is yet to be seen whether a sufficient volume of feasible loan proposals will be submitted that can make full use of the generous support Congress has provided for this valuable program. Loans are helpful when the availability of low cost capital acts as an impediment to deployment, but cannot overcome a carrier's inability to invest in areas that are simply uneconomic to serve. Thus, although loans can be helpful for some rural broadband projects, grants are the key to meeting the goals of universal broadband availability.

The grant programs enacted through the American Recovery and Reinvestment Act (ARRA) present the RUS and NTIA with both a tremendous responsibility and a momentous opportunity.²⁸ On the deployment side, the opportunity, of course, is to make significant progress toward the goal of ensuring that all Americans have access to high speed broadband services. The responsibility is to do so in a manner that fulfills the primary goal of the ARRA—the immediate stimulation of economic activity essential to re-invigorating the American economy. In order to meet the fiduciary duty placed on them by Congress, the President and the American public, RUS and NTIA must target broadband stimulus grant funds toward projects that will immediately stimulate economic activity and provide high speed broadband service.

²⁷See Rural Electrification Act of 1936, as amended, 7 U.S.C. 901-950bb.

²⁸See American Recovery and Reinvestment Act of 2009, Pub. L. No 111-5 (February 17, 2009).

New RUS program funding provided under ARRA should be used for grants to deploy broadband service in rural areas lacking sufficient access. The statute mandates that at least 75 percent of the area to be served by an ARRA funded project shall be in a rural area without sufficient access to high speed broadband service to facilitate rural economic development. Most of these areas remain unserved and underserved, not because of the absence or the price of credit, but due to the inability of broadband providers to demonstrate a feasible business case to bring service to very high cost, low density markets. Congress recognized the importance of grants for rural broadband deployment when it decided to create a new RUS broadband program under the ARRA to supplement preexisting RUS programs. By allocating new funds that could be used for grants Congress recognized that loans alone are not sufficient to addressing the lack of broadband infrastructure in sizable portions of unserved rural America.

The proportion of loan and grant funding apparently being contemplated by RUS for each particular project may be inadequate to provide service in truly unserved high cost areas. The Administration's budget request for the upcoming fiscal year appears to indicate an allocation to loans of a significant portion of the \$2.5 billion in funding provided through ARRA. The combined loan amounts for fiscal years 2009 and 2010 totals \$7.16 billion. Assuming that approximately \$500 million of ARRA funding would be required to yield this loan amount, that would leave \$2 billion for grants. On average, if each ARRA funded project received the same proportion of loan and grant funding, loans would be over 78% of the funding, with grants less than 22%. This ratio is almost the exact opposite of what is necessary to provide service to areas with no broadband service. No less than eighty percent of funding for each particular project should go to grants, with loans or applicant's own capital making up the difference. The broadband loan program is already in place to fund the provision of service in areas in which

loans can be found feasible. Congress explicitly added the grant program under ARRA to help provide service in those areas which are so low density and high cost that a loan cannot be made with an assurance that the government will be repaid.

RUS should emulate the NTIA grant structure by limiting its grant amount to 80 percent of the cost of a project absent clear and convincing demonstration of financial need. The two entities can develop a common grant application that by and large considers similar factors (within the constraints of the statute). This measure would simplify and accelerate consideration of applications for those not seeking RUS loans or loan guarantees by avoiding financial analysis beyond a finding of project sustainability.

RUS should limit use of loans and guarantees to instances in which the prospective broadband provider requires financing above the 80 percent grant level to serve unserved areas. RUS should prioritize applications in which non-federal sources, and particularly the grantee's own funds, make up the remaining 20 percent of required project funding. Then RUS should next fund applications that require the use of loans or loan guarantees for the remaining 20 percent. Finally, RUS should consider funding projects requiring 100 percent grants.

In addition to proper loan and grant ratios, clear, simple and streamlined procedures and definitions will best meet the goals of the broadband portion of the ARRA, stimulation of economic activity and the enhancement of the nation's broadband infrastructure. RUS should promptly adopt such procedures and definitions, leverage the expertise of USTelecom members and others, and proceed to the important task at hand.

NTIA must also structure its program to ensure that the funds are most efficiently used to bring high speed broadband service to unserved and underserved areas. An essential decision that NTIA must make as soon as possible in this process is identifying the scope of entities that

will be allowed to qualify for grants. The goals of this program and the ARRA generally make it essential to include, at a minimum, any private entity that is currently operating a broadband network as eligible to receive funding. Such companies are particularly well-positioned to fulfill the essential policy goals of the ARRA: immediate job creation leading to new broadband connections as soon as possible. Existing companies are demonstrably qualified to identify the areas where broadband investment is most needed; to have the operational know-how and infrastructure to undertake projects that will lead to the fastest possible creation of jobs; and to have the skills and experience to operate a continuing enterprise to provide broadband services to consumers.

Both RUS and NTIA will face huge challenges in fairly and quickly evaluating the enormous number of funding applications that are expected under the programs authorized by ARRA. Because many applicants will seek funding from both RUS and NTIA for projects involving build out of broadband infrastructure, the two agencies should apply common scoring criteria for those types of projects to the extent permitted by the statute. USTelecom has identified several factors that should be considered by both agencies in reviewing infrastructure projects:

- Providing service to unserved and underserved consumers
- Sustainability
- Timeliness of construction
- Broadband speed
- Affordability
- Impact on job creation and preservation and economic development
- Project cost

- Public interest projects

Key to the administration of both the NTIA and RUS programs are the definition of the terms “unserved area,” “underserved area” and “broadband.” These terms are undefined in the statute but are inextricably intertwined, so they should be dealt with holistically. These terms should be viewed by the agencies within the relative continuums within which they currently exist in this country, and the agencies will need to consider the benefits of each application along a spectrum of availability levels, speeds to be offered, population densities and costs. Each of these criteria is important and will involve tradeoffs that will require the agencies to establish policy priorities for the limited funds. With this in mind, USTelecom urges the agencies to set priorities that are focused on bringing areas and communities most lacking in broadband infrastructure up to levels available to the majority of Americans.

The highest value should be given to projects for areas that lack access to terrestrial (non-satellite) broadband services offering advertised speeds at or greater than 768 kbps in one direction. This is the low end of the range of services that the FCC defines as “basic broadband tier 1.” The next value should be given to projects for areas that lack access to terrestrial broadband service offering advertised speeds at or greater than 1.5 Mbps in one direction. This is the high end of the range of services that the FCC defines as “basic broadband tier 1.” The lowest value should be given to projects for areas that lack access to terrestrial broadband service offering advertised speeds at or greater than 3 Mbps in one direction. At that level, broadband can support certain key applications (particularly standard definition video) that can have significant positive economic effects, such as supporting work-at-home and distance education, become usable.

The agencies should also separately examine and give weight to targeted deployment to strategic institutions with potentially higher broadband needs than discussed above, where such projects are likely to stimulate significant community access or economic benefits to a particular community. Infrastructure projects that result in new or improved broadband services to institutions such as community colleges, regional hospital networks or other strategic entities can generate job creation, meet rural education or medical needs, and in other ways satisfy the economic goals identified by Congress.

The benefits of the broadband programs created by ARRA should not be diminished by an onerous requirement going beyond the current application of the Commission's broadband Policy Statement. NTIA should define the existing FCC Policy Statement as creating the sole non-discrimination and interconnection obligation to be placed on grant recipients. More than three years of experience under that Policy Statement has demonstrated its successful balancing of interests among stakeholders – consumers, broadband service providers, application and content providers and technology companies. Implementation of the Recovery Act should support, not hinder, the ability of providers to continue to expand and enhance services and speeds. NTIA should make the FCC Policy Statement, without any expansion, the sole criterion for non-discrimination and network interconnection obligations.

Although the programs established in ARRA are an ambitious start towards addressing the capital requirements of areas unserved and underserved by broadband, more will need to be done in the future. This may be accomplished by additional funding provided to NTIA and RUS grant programs, or through other mechanisms such as a universal service type approach to funding broadband build out.

4. Tax Incentives

There are currently disparate rules with regard to the tax treatment of broadband equipment. To provide incentives to invest in such equipment, as well as to put all industries and technologies on an equal footing, such disparity should be addressed by affording all broadband investment the most favorable tax treatment provided to any equipment today.

IV. Demand Side: Government Policies for Removing Barriers to Adoption

While much of the public debate on broadband has focused on access issues, a potentially larger challenge facing policy makers is on the demand side: lack of computers, lack of computer education and perceived lack of Internet relevance at least are major impediments to America becoming a truly broadband nation. While efforts to incent broadband deployment to uneconomic areas must be part of America's broadband strategy, agencies at all levels of government are particularly well-positioned to take steps that will encourage those with access to get on-line.

A. Government's Ability to Create On-Line Value

In recent surveys by the Pew Internet and American Life Project, *more than half* of non-broadband subscribers responded – in effect- that they simply did not view broadband as necessary to their everyday lives. This compares to just 14% who cited the cost of broadband as the main impediment; and another 14% who cited lack of broadband availability.²⁹ Accordingly, some of the most significant opportunities for government policies to bring citizens on-line is by using the resources within its own control to create additional value to being connected.

This is not about developing the “killer app” but rather creating everyday incentives for the public to utilize broadband in their lives. The Federal Government (and governments at all

²⁹*Obama's Online Opportunities*, John Horrigan, Associate Director for Research, Pew Internet & American Life Project (January 21, 2009).

levels) is in a position to create such incentives by evaluating each and every program that has a public constituency and making those programs broadband-friendly.

As noted previously, the focus of a “Broadband Strategy” should not simply be about deploying facilities, but rather should be about making available to citizens the benefits that broadband makes possible. In other words, rather than having a “Broadband Strategy” that encompasses the vast array of issues that might benefit from broadband, the goal is to ensure that agencies are incorporating a broadband platform into every government policy – particularly those with direct public interaction.

For example, in the *NOI*’s section on “Specific Policy Goals of the National Broadband Plan” the Commission notes that it is required to develop “a plan for the use of broadband infrastructure and service in advancing” a series of public policy goals. We urge the Federal Government to review each of its programs in these policy areas to ensure that using broadband to its fullest extent is a fundamental part of every policy program and decision. Similarly, in the section entitled “Improving Government Performance and Coordination with Stakeholders” the Commission asks for comments on how a coordinated effort among federal departments and agencies, tribal, state and local governments; and interested groups and individuals may enable the nation to achieve Congress’ goal that all Americans have access to broadband. But the real focus should be on how these stakeholders (including government agencies) can use broadband to most efficiently and effectively deliver these policies and services, which in turn will create the incentives for broadband deployment and adoption.

Indeed, some of President Obama’s primary policy goals involve areas that could benefit dramatically from a focus on broadband as the primary vehicle for providing services to the American public. For example:

- **Health Care:** More than 1 million Americans have in-home cardiac health monitoring today—but expanding broadband based remote monitoring to all chronically ill patients could reduce U.S. health care expenses by as much as 25%.³⁰ Making government medical benefits more readily accessible on-line will improve the lives of beneficiaries, such as the elderly, while also creating incentives for them to subscribe to broadband.
- **Education:** Broadband allows student in the most rural areas to have access to the same educational opportunities as are available in urban and suburban school districts. Today, more than half of Alaska’s school districts offer courses on-line. Besides bringing educational benefits to rural and low income school districts, such programs help develop computer literacy among their residents—an essential tool for quality, well-paying jobs.
- **Environment:** Telecommuting can reduce greenhouse gas emissions by nearly 600 million tons over 10 years due to less driving, reduced office construction and energy savings by businesses. As large employers, federal, state and local governments can be catalysts for large-scale adoption of telecommuting policies.

B. Other Key Policies Issues Affecting Adoption

There are a number of other key policy areas that may affect adoption while also having broader consequences. These issues require the government’s attention and clear rules of the road in order for the Internet to fully develop and flourish.

³⁰Robert Litan, New Millennium Research, “Massive Economic Benefits Foreseen: Ultra-fast Telemedicine and Telecommuting Can Save Money and Improve Quality of Life” (2006).

1. Privacy Issues

Ensuring that consumers have confidence in the privacy and security of their personally identifiable information is essential to providing consumers with the confidence to make full use of their broadband access. Consumers must be able to file their taxes online, participate in e-commerce, and make use of e-health applications, secure in the knowledge that their personally identifiable information is safe.

Innovation on the Internet can be fueled by advertising-supported services. Marketing tailored to consumers' interests – sometimes called “interest-based advertising” or “behavioral advertising” – is used across a wide array of industries and technologies. Online interest-based advertising programs replace generic advertisements with more useful marketing information responsive to a consumer's particular interests. Online interest-based advertising programs can support innovation and dynamism in the online world.

The advertising ecosystem that delivers interest-based advertising is complex and can involve multiple actors such as advertisers, advertising networks, advertising and web publishers, as well as search engines, e-mail and Internet service providers, web portals, toolbars and browsers. No matter where in the advertising ecosystem these advertisements originate, they must be transparent to the consumer. Consumers must have easy to understand and prominent notice that explains what data is being gathered, how it will be used and that provides meaningful choice in whether to participate in any internet-based advertising programs. The consumer must understand and be able to exercise control in order to foster consumer trust and engagement in the on-line world.

USTelecom is supportive of the efforts of the Federal Trade Commission (FTC) to guide the industry in developing robust self-regulatory principles that are technology neutral and

encompass all who offer interest-based advertising.³¹ The FTC principles of “transparency and consumer control,” including “effective notice and choice;” “reasonable security and limited data retention for consumer data;” “affirmative, express consent for material retroactive changes to privacy promises;” and “affirmative express consent to (or prohibition against) use of sensitive data”³² are the building blocks of a robust and effective self-regulatory regime. USTelecom members are committed to working with all others in the advertising ecosystem, with consumer groups and with regulators to ensure that such self-regulatory principles are put in place and that they have a vigorous enforcement mechanism. We believe that in light of the industry self-regulatory efforts underway, including those of our own members, it would be premature to regulate in this complex and fluid arena.

2. Empowering Parents to Ensure On-Line Safety

As broadband deployment in the United States has increased, American families and consumers increasingly rely on the Internet to carry out daily routines in their lives. In today's fast moving world of media access, families are staying connected over the Internet, and increasingly consuming digital media over a wide offering of platforms, including portable devices (*e.g.*, iPods), home entertainment centers (*e.g.*, digital video recorders) and even cell phones. USTelecom believes that when it comes to families, ensuring that consumers have a positive experience in the broadband Internet environment is essential to promoting increased broadband adoption.

But keeping up with the latest safety features, tools and information can be a challenge for parents. As noted in the recent Pew Internet & American Life study,³³ many youth in the United States today have fully integrated consumption of digital content into their daily lives. For many children today, the Internet has become a positive and powerful space for socializing, learning, and engaging in public life. Of course, accompanying these positive aspects come certain risks, including broader issues of online safety,³⁴ and potential exposure to problematic, objectionable and possibly illegal content.

³¹See *FTC Staff Report: Self-Regulatory Principles for Online Behavioral Advertising* (2009), available at <http://www2.ftc.gov/os/2009/02/P085400behavadreport.pdf> (last visited June 2, 2009).

³²*Id.*

³³Pew Internet Study, *Teens and the Internet*, January 2009 (available at: <http://www.pewinternet.org/Presentations/2009/Teens-and-the-internet.aspx>) (visited April 14, 2009).

³⁴Online safety is a fairly broad topic that generally addresses the risk of children and teenagers encountering online sexual solicitation, online harassment, and bullying, and exposure to problematic and illegal content.

This increase in the number of platforms³⁵ for media distribution has, not surprisingly, resulted in an increase in the amount of time children consume media content. Children six years and younger average almost 2 ½ hours of daily exposure to media content, while children 8 to 18 use various technologies (e.g.; television, video players, video games, computers) close to five hours each day.³⁶ In many instances, children can access the same source of content from a variety of media platforms – an episode of ‘Dora the Explorer’ recorded on the home digital video recorder (DVR), can be viewed over a broadband Internet connection, and/or downloaded to an iPod.

As the Commission has noted elsewhere, this “ubiquity of media in the lives of children and the portability of many media devices makes direct adult supervision of the content of the media to which children are exposed increasingly difficult.”³⁷ But as access to this content has increased, so too have the tools available to parents to help them better control media content and raise their children as they see fit. These parental control tools – which are being provided to consumers by USTelecom’s members and other third party providers³⁸ – empower parents to shape the development of their children, to instill their values, and to exercise authority over when, where and how their children consume media content.

USTelecom’s member companies are at the forefront of empowering parents in today’s dynamic media marketplace. As consumers and the industry move towards bundled packages of video and Internet offerings, there is a strong desire within the industry to provide parents with the tools necessary to ensure that their child’s experience in this robust media marketplace is safe, fun and exciting. In creating such a healthy environment for children and families, USTelecom believes that broadband Internet connectivity will continue to be viewed by parents as an essential – and safe – tool for their families.

And USTelecom and its member companies are not stopping there. USTelecom realizes that as innovations in technology continue to develop, the issue of online safety also continues to change. In this regard, the association and many of its member companies are engaged in an

³⁵In the majority of homes with children there are at least three television sets, which access media over the air or through cable or satellite services. The average TV household in the United States receives 17 broadcast TV stations and more than 118 television channels. In addition to this video programming, many homes own other platforms for distributing and accessing various content, including DVD players, computers with Internet access, various mobile devices (e.g. iPods) as well as cell phones and smart phones that are all capable of playing both audio and video content. *Notice*, ¶2.

³⁶*Notice*, ¶3.

³⁷*Id.*

³⁸See e.g., Thierer, Adam, Special Report, *Parental Controls & Online Child Protection: A Survey of Tools & Methods*, Version 3.1, The Progress & Freedom Foundation, Fall, 2008 (available at: <http://www.pff.org/parentalcontrols/Parental%20Controls%20&%20Online%20Child%20Protection%20%5BVERS%20ION%203.1%5D.pdf>) (visited April 16, 2009); Family Online Safety Institute, *The Parents’ Child Protection Guide for the Internet*, (<http://www.fosi.org/en/resources/parents/parentsguide/parentsguide.pdf>) (visited April 16, 2009); TV Watch Report, *Television Tools for Parents 101*, September 2008, (www.televisionwatch.org/HelpForParents/toolsforparents.pdf) (visited April 16, 2009). An additional and exhaustive review of available parental control tools and ratings systems in today’s media marketplace, covering television, movies, music and radio, video games, wireless and mobile media, and Internet and social networking sites, can be found in comments filed in this proceeding. See Comments of Adam Thierer, Senior Fellow with the Progress & Freedom Foundation, pp. 16-97 (filed April 16, 2009).

ongoing basis to proactively address issues in the online safety arena. These efforts include voluntary internal deliberations, outreach to third party organizations and involvement with governmental and industry initiatives.³⁹ By providing consumers with the tools they need in today's Internet marketplace, and working proactively to address developing issues in this area, industry leaders can ensure that the Internet remains a safe and enjoyable environment for all consumers.

3. Public Safety and Security Issues

The American Recovery and Reinvestment Act of 2009 requires that the Commission include "a plan for use of broadband infrastructure and services in advancing... public safety and homeland security."⁴⁰ USTelecom urges the Commission to design the plan in a fashion that complements and supports overarching legislation, strategies, initiatives, directives, and coordinating mechanisms that currently exist to address this vital area of interest and concern. We also believe that the FCC's current inquiry should build upon the substantial record of achievement and collaboration between public and private sector stakeholders.

As part of its expansive examination of issues related to the development of a national broadband plan, the FCC acknowledges the critical relationship between broadband deployment and public safety and security. As the FCC references in its introduction, the ARPANET was developed by United States Department of Defense during the Cold War and was the world's first operational packet switching network and predecessor of the global Internet. With its origins firmly embedded in matters of national security and public safety, the Internet and broadband deployment will continue to have enormous implications for our economic and national security as well as our societal way of life.⁴¹

³⁹See e.g., National Telecommunications & Information Administration Press Release, *Commerce's NTIA Announces Working Group to Advise on Industry Efforts to Promote a Safe Online Environment for Children*, April 28, 2009 (listing USTelecom as a member of the Online Safety & Technology Working Group).

⁴⁰American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009) (Recovery Act). The Recovery Act was signed into law on February 17, 2009.

⁴¹2009 Annual Threat Assessment of the Intelligence Community for the Senate Armed Services Committee, Statement for the Record by Director of National Intelligence Dennis C. Blair before the Senate Armed Services

The government has identified the Communications Sector and the Information Technology Sector as “critical infrastructures and key resources”⁴²(CI/KR) because these sectors underlie the operations of all business, public safety organizations, and government. For purposes of these comments, we maintain that all broadband infrastructure is deemed to be critical infrastructure (CI) as it is used by government and industry stakeholders to provide essential services to Americans and serve as underpinnings to society at-large.⁴³

As recently as May 29, 2009, President Obama addressed threats associated with cybersecurity and characterized our “digital infrastructure” as a “strategic national asset.”⁴⁴ He noted that protecting this infrastructure will be a national security priority and that “we will ensure that these networks are secure, trustworthy, and resilient.”⁴⁵ The President went on to assert that “we will deter, prevent, detect, and defend against attacks and recover quickly from any disruptions or damage.” Likewise, USTelecom recognizes that these communications and information networks, which together form the foundation of our broadband infrastructure, must be designed, built, managed, and operated in ways that enhance our overall public safety and homeland security.

Committee March 10, 2009. “. . . *The U.S. information infrastructure, including telecommunications and computer networks and systems, and most importantly the data that reside on these systems is critical to virtually every aspect of our modern life.*”

⁴²White House, Homeland Security Presidential Directive 7 (HSPD-7), *Critical Infrastructure Identification, Prioritization, and Protection*. Released December 17, 2003, established U.S. policy for enhancing CIKR protection by establishing a framework for NIPP (National Infrastructure Protection Plan) partners to identify, prioritize, and protect the nation's CIKR. The directive identified 17 CIKR sectors and designated a federal Sector-Specific Agency (SSA) to lead CIKR protection efforts in each. See U.S. Congressional Research Service Report for Congress, *Critical Infrastructure: Background, Policy, and Implementation*, Order Code RL30153, updated October 10, 2008.

⁴³See Executive Order 13231, as Amended, *Critical Infrastructure Protection in the Information Age*; [National Strategy for the Physical Protection of Critical Infrastructures and Key Assets](#); A more general definition is given in statute (Homeland Security Act of 2002): “... systems and assets, physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health and safety, or any combination of those matters.”

⁴⁴[5/29/2009 Remarks by the President on Securing Our Nation's Cyber Infrastructure](#). (Last visited June 8, 2009).

⁴⁵*Id.*

In these comments, we seek to describe some of the foundational activity that we believe the FCC can leverage in its consideration of public safety and homeland security matters as they relate to broadband deployment. Clearly, the events of September 11, 2001 and Hurricane Katrina have increased Government and private sector sensitivities concerning the threats and vulnerabilities to our nation's critical infrastructure. A Presidential directive issued in December of 2003 established a national policy framework for Federal departments and agencies to identify and prioritize critical infrastructure. In the case of the communications sector, the FCC has observed that over 90% of the infrastructure is in the hands of the private sector.⁴⁶ Consequently, the Government has recognized the value of promoting public-private partnerships that help ensure effective, timely, and targeted solutions. The FCC can make a substantial contribution to the development of a national broadband plan by identifying and integrating into the plan a large body of collaborative initiatives that either precede or are currently underway.

The FCC seeks input on how to interpret and implement the Act's directive to advance public safety and homeland security including an analysis of existing policies and programs that are on point. USTelecom suggests that the FCC include in its analysis a comprehensive review of relevant statutory and executive authority as well as key Federal strategies and initiatives that have a direct bearing on this question. This effort would help ensure that the elements of a national broadband plan are properly grounded in existing authority and are in alignment with federal goals and directives with regard to public safety and homeland security considerations. This effort would also ensure that previous recommendations and studies and current development activities are all factored into the construction of a national broadband plan.

⁴⁶See FCC Strategic Plan 2009-2014, p. 15.

For example, The Homeland Security Act of 2002⁴⁷ provides the primary authority for the homeland security mission and establishes a foundation for various nationwide initiatives such as emergency communications. National efforts to provide strategic direction and vision are embodied in several recent works. The *National Strategy for Homeland Security*⁴⁸ draws attention to situational awareness as a critical component of incident management response capabilities. The vital need for communications interoperability and survivability is also documented in this report. Another important strategic contribution is the *National Strategy for Physical Protection of Critical Infrastructure and Key Assets*⁴⁹ which identifies numerous actions and priorities for national preparedness related to communications, including improvements for public safety communications, development of interoperable and secure communications systems and interoperability standards, and the development of common standards and terminology for equipment and training.

Federal Directives and Executive Orders also provide relevant information on existing mandates, initiatives, and responsibilities that impact broadband networks in times of emergency.

The *Homeland Security Presidential Directive 5*⁵⁰ (HSPD 5) required the Department of

⁴⁷The Homeland Security Act of 2002, as amended by the Homeland Security Appropriations Act of 2007, provides the primary authority for the homeland security mission and establishes a foundation for emergency communications efforts nationwide. The legislation amended the Homeland Security Act of 2002 to add Title XVIII—Emergency Communications, establishing the Office of Emergency Communications (OEC) and specifying its responsibilities. It also transfers existing programs (e.g., Integrated Wireless Network, Interoperable Communications Technical Assistance Program) and elements of other programs (e.g., SAFECOM) to OEC and assigns new responsibilities (e.g., National Emergency Communications Plan, National Baseline Assessment, and outreach and coordination).

⁴⁸*National Strategy For Homeland Security*, updated October 2007.

⁴⁹*The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets* (February 2003) identifies a set of national goals and objectives and outlines the guiding principles intended to underpin efforts to secure the infrastructures and assets vital to our national security, governance, public health and safety, economy, and public confidence.

⁵⁰White House, Homeland Security Presidential Directive (HSPD) 5, Management of Domestic Incidents, February 28, 2003.

Homeland Security to develop and implement a *National Incident Management System*⁵¹ (NIMS) and the *National Response Plan*⁵² (NRP). HSPD 8⁵³ mandated the development of a *National Preparedness Guidelines*⁵⁴ that was designed to assist entities build and maintain capabilities to prevent, respond, and recover from major incidents. There exist other directives and executive orders that impact network deployment including those that relate to spectrum, critical infrastructure (HSPD-7), telecommunications continuity, and alert and warnings. The FCC will want to consult the various orders and initiatives that direct various federal departments and agencies and the outputs of these departments and agencies as they are likely to provide important guidance on broadband deployment and its relevance to public safety and homeland security initiatives.

There are numerous activities that are currently underway that involve federal, state and local agencies and departments, non-governmental organizations, industry associations and member companies and citizen groups and individuals. In many instances, entities and initiatives are organized with the intention of engaging numerous and diverse stakeholders in a collaborative process of focused activity to produce actionable recommendations or plans. The

⁵¹National Incident Management System (NIMS), Department of Homeland Security, August 2007. NIMS provides a nationwide template for incident management, establishing uniform doctrine for command and management, resources, communications, information management, and supporting technologies. Specific to communications, NIMS defines concepts and principles (e.g., interoperability, reliability, resiliency), management characteristics (e.g., communications types, planning, equipment standards, training), and standards and formats (e.g., radio usage procedures, plain language), which are reflected in the 2008 National Emergency Communications Plan.

⁵²The DHS National Response Plan has been renamed the National Response Framework (NRF) to better align the document with its intent and to encourage the continued development and refinement of detailed, robust all-hazards emergency operations plans. The NRF provides structures for implementing national-level policy and operational coordination for domestic incident response. The NRF Resource Center website address is <http://www.fema.gov/nrf> (last visited June 3, 2009).

⁵³White House, Homeland Security Presidential Directive 8 (HSPD-8), National Preparedness, December 17, 2003.

⁵⁴DHS National Preparedness Guidelines, September 2007.

FCC itself is looking to the CSRIC⁵⁵ as a way of continuing the success of the NRIC⁵⁶ in bringing industry and government subject matter experts together in a non-threatening environment to identify practices that are likely to mitigate risk and optimize restoration capabilities. The FCC Public Safety and Homeland Security Bureau has been effective in reaching out to industry associations and regulated companies to discuss threats to broadband infrastructure and the capabilities of providers in relation to various natural and man-made threats. Recently, USTelecom presented findings of a member study on pandemic planning and preparedness to the Bureau. These discussions led to further refinements among our members and the dialogue continues across various public safety and homeland security issues. Recently we have discussed with the FCC an interest in working with the Public Safety and Homeland Security Bureau and the Consumer Government Affairs Bureau on initiatives that help educate consumers about the threats in cyberspace and the steps that consumers can take to significantly reduce their risks.

Further evidence of successful collaboration occurs in the partnership model that is part of the Critical Infrastructure Partnership Advisory Council (CIPAC)⁵⁷ that was set up by the Department of Homeland Security to facilitate effective coordination between federal infrastructure programs and those protective activities of the private sector and state, local, territorial, and tribal governments. This initiative includes private and public-sector councils for each of the 18 identified national sectors including communications. The Communications

⁵⁵See, *FCC Seeks Nominations by May 11, 2009 for Membership on the Communications Security, Reliability, and Interoperability Council (CSRIC)*, DA-09-816, Public Notice, April 10, 2009.

⁵⁶See FCC PSHSB Advisory Committee links, <http://www.fcc.gov/pshs/advisory/> (last visited June 2, 2009) ; also, NRIC, <http://www.nric.org/> (last visited on June 2, 2009).

⁵⁷The DHS CIPAC web site address is http://www.dhs.gov/xprevprot/committees/editorial_0843.shtm (last visited June 2, 2009).

Sector Coordinating Council (C-SCC)⁵⁸ works in partnership with its sister Communications – Government Coordinating Council (C-GCC) on a broad array of planning initiatives that are designed to enhance critical infrastructure protection for public safety and homeland security purposes. USTelecom chairs this 39-member organization that represents the full spectrum of broadband providers, including those in the wireline, wireless, cable, satellite, and broadcast segments. Currently, the C-SCC and the C-GCC have identified a number of potential partnership projects that involve areas of cyber coordination, regionalization, information sharing, and emergency response and recovery operations. The respective councils identified these four areas as ones that could benefit greatly from coordinated engagement between the public and private sector. It also worth noting that state and local representation is captured through the active participation of a State Local Tribal-GCC member on the Government Communications Coordinating Council. Industry also plays a vital role in creating applications that enhance public safety and homeland security such as e- government, tele-health and tele-medicine.⁵⁹ All of these initiatives have the effect of enhancing the safety and security of individuals and entities that rely on broadband networks to deliver all manners of life- and work-enhancing services.

In executing its role to develop a national broadband plan, the FCC can take notice of efforts and promote strategies that, among other things, encourage development of new broadband facilities and applications, promote sensible public-private partnership activity, maximize Government and industry investment, and limit wasteful and time-consuming

⁵⁸The C-SCC web site address is <http://www.commscc.org/> (last visited June 2, 2009).

⁵⁹See NextGenWeb, <http://www.nextgenweb.org> (last visited June 2, 2009); See Report by The Information Technology & Innovation Foundation, *The Need for Speed: The Importance of Next-Generation Broadband Networks*, by Stephen Ezell, Robert Atkinson, Daniel Castro and George Ou, March 2009, (last visited June 2, 2009).

duplication of effort. This type of cross-jurisdictional, cross-governmental, and cross-industrial examination could substantially enhance the preparedness and response capabilities of public- and private-sector stakeholders and minimize the consequences of natural and man-made threats to our physical and cyber infrastructure.

CONCLUSION

USTelecom's member companies are investing billions of dollars every year to ensure that all Americans have the opportunities afforded by broadband access to the Internet. We look forward to working closely with Congress and the Commission as they map a strategy towards this common goal.

Respectfully submitted,



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June 8, 2009